

HOPE'S
Catalogue
of
Metal Windows

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HOPE'S

CASEMENTS WINDOWS & LEADED GLASS

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Henry Hope & Sons

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Cables: "CONSERVATORY, BIRMINGHAM"

CODES:

PRIVATE

Western Union &

A.B.C., Fifth Edition.

THIS edition of our Catalogue illustrates various refinements upon our Standard Sections made since 1909, and contains much new material.

The quality of our work is shewn more correctly by a new method of illustration, and we have greatly condensed the descriptive matter of the book to simplify reference as much as possible.

We have recently purchased the Goodwill, Patterns, Trade Marks, Designs & Patents of Wenham & Waters Limited, and are in a position to supply casements, casement fittings, and leaded glass to any of their designs.

September, 1912.

All previous lists cancelled.

PAGE	
4-6	I
7	C
8-9	S
10-11	
12-13	
14-15	
16-17	
18-19	
20-21	
22-23	
24-25	
26-27	
28-29	
30-31	
32-33	
34-35	
36-37	
38-39	
40-41	
42-43	
44-45	
46-47	
48-49	
50-51	
52-53	
54-57	
58-59	
60	

Index

PAGE		PAGE	
4-6	Introduction.	61	Hardware.
7	General Specification.	62	„ Two-Point Handle.
8-9	Section I.	63	„ Specification.
10-11	„ „ French Casement.	64-67	„ Standard Hardware.
12-13	„ 1a.	68	„ Double Grip Bolts.
14-15	„ „ French Casement.	69	„ Cremorne Bolts.
16-17	„ 1c. Cleaning Casement.	70-72	„ for Transome Casements
18-19	„ 2.	73-76	„ Special Wrought-iron Fasteners.
20-21	„ 2a.	77	Setting and Glazing.
22-23	„ 3 & 3a.	78-79	Particulars for Ordering.
24-25	„ 4.	80-81	Details of Setting in Brickwork.
26-27	„ 4a.	82-85	Winter Sashes, double glazing, and Fly Screens.
28-29	„ 4c. Cleaning Casement.	87-100	Leaded Glass.
30-31	„ 6.	101-105	Operating Gear.
32-33	„ 6a.	107-157	Photographs of Buildings, etc.
34-35	„ 8. “Garden City” Casement.	158-159	Door Furniture.
36-37	„ 9.	160-161	Lead Work.
38-39	„ 14 & 15. Swinging Casements.	162-163	Roof Glazing.
40-41	„ 12a. Hoppers and Checks.	STEEL SASH SUPPLEMENT.	
42-43	Fixed Lights.	2-3	Steel Sash Standard Sizes.
44-45	Office Building Windows	4-9	„ „ 1 in. Section, with various Ventilators.
46-47	„ „ Design Z.	10	„ „ Setting to Steel.
48-49	„ „ „ Y.	11	„ „ „ Ferro-Concrete.
50-51	„ „ „ X.	12-13	„ „ 2 in. Sections.
52-53	„ „ „ W.	14-15	„ „ L Section.
54-57	Hospital Windows.	16-17	„ „ Ranges of Windows with Tension Rod Gearing.
58-59	Steel Doors.	18	„ „ Power Station Window.
60	Casement Doors.	19	„ „ Specification.
		20	„ „ Stock Sections.
		21-24	Photographs of Buildings.

Introductory Notes

Our Sections

Sections 1, 2, 3, 4, 6, 8 & 9 *Open Outwards* and are hung at side or top.

Sections 1a, 2a, 3a, 4a & 6a *Open Inwards* and are hung at side or bottom.

Sections 1c & 4c are *Cleaning Casements* hung on vertical pivots.

Quality

We have three qualities representing three grades of finish. Qualities 1 & 2 are both oiled and painted two coats of white lead paint, but Quality 1 is fitted with Bronze fittings and Quality 2 with Iron fittings. Quality 1a is specially highly finished with a coat of hard setting enamel on the top of the two coats of paint, and has Bronze fittings and sill bars. This quality meets the demand for specially good work where the cost of Bronze casements is prohibitive.

The care and trouble bestowed on finishing our work, together with the exceptional quality and character of our fittings, should be noted in comparing prices with other makes.

Which Section to use

Sections 1, 1a & 1c. For large casements in buildings of importance, where great strength and absolute exclusion of weather are a necessity.

Sections 2 & 2a. For casements of moderate size where first-class work is required.

Sections 4, 4a & 4c are a special range, every form of which, whether Outward or Inward opening, can be fixed in an ordinary outside rebate. They are stronger than Section 2, and are particularly suitable for composite windows.

Sections 6 & 6a are of the same strength and character as Section 2, but with a moulded edge for use where the casements are divided into panes with moulded bars.

Sections 3 & 3a. For ordinary domestic work where economy is of importance and the height of the casement does not exceed 3ft. 6in.

Section 9 (a casement without frame). For ordinary domestic work where rigid economy is necessary.

Section 8 (casement without frame). For cottage property.

Fly Screens

On pages 82 to 85 we illustrate and describe the best methods of applying fly screens, and (where considered necessary) winter sashes in connection with our metal casements.

Hope's Casements

for domestic work, have a world-wide reputation. Our patterns range from the best weather-tight window that can be produced by fine machinery to the simplest form of cottage casement, and afford a wide selection in design and price. All our casements are easily opened and can be rigidly stayed at any distance from a quarter of an inch to the full width of the window opening. They give perfect ventilation and are proof against distortion in any climate.

Hope's Office Windows

are designed to meet modern requirements, viz. :—A maximum amount of light and ventilation; The absolute exclusion of dust and rain, and resistance to fire from without and within; Conditions which are desirable in all buildings, but which are now a necessity for Offices, Warehouses, Stores, and buildings of a similar character.

To meet this necessity we have developed a special type of window which entirely meets the conditions enumerated above and affords a wide selection in various forms of window opening (pages 44 to 53).

Metal Windows for Public Buildings

also windows for large shopping premises, and works of a monumental character, are usually of special design and provide a legitimate field for architectural enrichment. We are quite satisfied that work of this character is to have a great future, and we are prepared to give expert advice upon the design of such windows and to assist architects with drawings, specifications and prices for any scheme of fenestration however elaborate.

Bronze Metal Casements

For the highest class of work we strongly recommend the use of solid bronze; it is everlasting in wear; has a beautiful surface; and improves in colour with age. We make all our sections in this metal and will furnish estimates of the cost and samples when desired.

Leaded Lights and Painted Glass

The importance of leaded glazing being manufactured in the same works and under the same supervision as the metal casements is now well recognised, and our work in this department will be found thoroughly satisfactory.

Welding

We use the Oxy-Acetylene process of welding wherever it is advantageous to do so. We particularly call attention to our "spot welding" system at the intersections of the bars in our steel mitre joint sashes (see supplement at end of book).

Dimensions

In sending sizes the instructions given on pages 78 and 79 should be observed. Where a large number of casements are ordered, a practical representative will be sent free of charge to take sizes, and where this is done we take all responsibility for the work being accurate.

Setting

In all cases we strongly advise customers to arrange for the setting and glazing to be done by our men. Estimates will be forwarded on application.

Guarantee

Section 1 is guaranteed weather-tight in any situation.

Sections 2, 4 and 6 are weather-tight in all but the most exposed places at high elevations, or on the sea coast.

Section 3 is weather-tight in all ordinary situations.

In all cases our guarantee is subject to the details of the heads, jambs, and sills of the window openings being approved by us.

Factory Sashes

The importance of the daylight lighting of modern factories is now fully recognised, and we have recently enlarged our plant to meet the increased demand for our steel sashes. We only manufacture sashes of high grade, with substantially designed and well fitting ventilators which open easily when required and resist the weather when closed. Architects who require serviceable sashes of unquestionable high quality should specify "HOPE'S" manufacture, without any qualification which will enable an article that may be described "as good as" to be substituted for the sake of extra profit.

TERMS OF PURCHASE

Cash on the 10th of the month following date of delivery.

Special terms as to payment, etc., will be made for large contracts.

SPECIFICATION

of Manufacture of

HOPE'S CASEMENTS

Bars. Each section is of solid rolled mild steel, hydraulically straightened, and free from hammer marks or distortions of any kind.

Joints. All joints are cut on milling machines with special cutters of correct contour for each section. (This method ensures absolutely perfect joints and eliminates the risk of breakage, which is never absent from punched and hand-filed work).

Every joint after machining is rivetted, brazed and sandblasted. *Sandblasting removes the flux and scale and exposes the finished joint for inspection.*

Plates & Brackets. The handle plates and stay brackets are mild steel drop forgings accurately machined, rivetted and brazed to the casements.

Hinges. Our hinges are for the most part of mild steel forgings, turned and bored and bushed with BRONZE.

Where this type is unsuitable, we use solid bronze butts to special heavy patterns of our own manufacture.

Painting. For Qualities 1 & 2 : Two coats of oil paint after thorough cleaning. For Quality 1a, an additional coat of hard drying enamel.

Fit & Finish. The best. Only first class well trained artisans are employed upon this work.

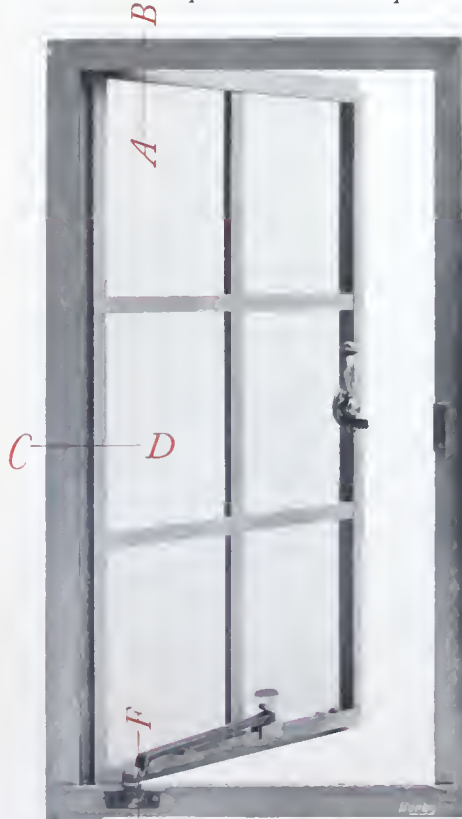
INSPECTION. All our casements are subjected to a rigid inspection as to size, quality and finish before despatch.

HOPE'S SECTION, 1.

Outward Opening Casement with Frame



Top hung Casement (for use above transome) Quality 1, with \perp bars, and fitted with Hope's Patent Cam Opener



Side hung Casement Quality 1, with \perp bars, and fitted with Handle 20a on Plate 890, and Stay 223.

Outside

Section A—B



Section C—D

Inside

Section E—F

DETAILS
FULL SIZE



For full Specification of manufacture see page 7.

NOTES on SECTION, 1.

CASEMENTS HUNG AT SIDE

Are supplied any height not exceeding 7 ft. by any width not exceeding 3 ft., and in three qualities.

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223, or any of the Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 5 ft. high are fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

For use above transome are supplied any height not exceeding 3 ft. by any width not exceeding 3 ft., and in three qualities.

QUALITY 1 fitted with Openers 506, 727 or 502 (see pages 70 and 71), or any of the Bronze Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 10 and 11, and are supplied in any height not exceeding 7 ft. by any width not exceeding 4 ft.

The illustrations on the opposite page shew the casements divided into panes with L bars, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be prepared for leaded glass. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

This section is suitable for all buildings of the best class and is guaranteed weathertight in the most exposed situations.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a 3/4 in. outside rebate as shewn on opposite page.

EXAMPLES. Bank of New South Wales, page 128.

McGill University, page 135.

Also the same section in solid bronze, Lympne Castle, p. 155.

For instructions as to ordering see pages 78 & 79.

HOPE'S

SECTION, 1. FRENCH CASEMENT

Outward Opening Casement & Frame (**With Mullion**)



One pair of French Casements (with mullion) with 1 bars, fitted with Handle 497 on Plate 890 and Double Grip Bolt and Stay 223.



Section A-B, half full size.

French Casements (with mullion), as above illustration, are also manufactured of Section 2, see page 18; Section 4, see page 24; and Section 6, see page 30. *For details of jambs, head and sill, see page 8.*

H O P E'S

SECTION, 1. FRENCH CASEMENT

Outward Opening Casement & Frame (**Without Mullion**)



One pair of French Casements (without mullion) with 1 bars, fitted with Cremorne Bolt and Stay 223.



Section A-B, half full size.

French Casements (without mullion), as above illustration, are also manufactured of Section 2, see page 18; Section 4, see page 24; and Section 6, see page 30.
For details of jambs, head and sill, see page 8.

HOPE'S SECTION, 1a.

Inward Opening Casement with Frame

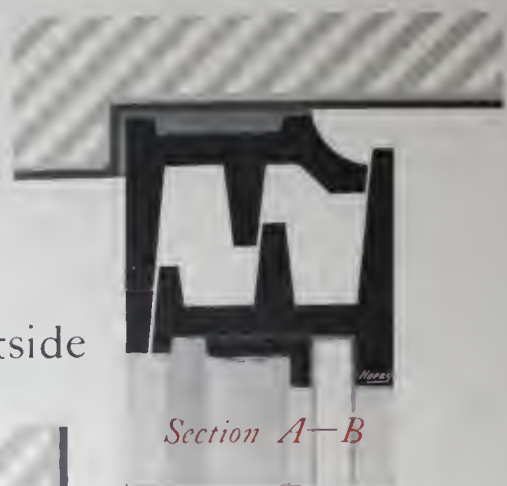


Bottom hung Casement (for use above transome) Quality 1, with 1 bars and fitted with Spring Catch and Hope's Patent Passable Side Arms.



Side hung Casement, Quality 1, with 1 bars and fitted with Handle 258 and Stay 223.

Outside



Section A-B

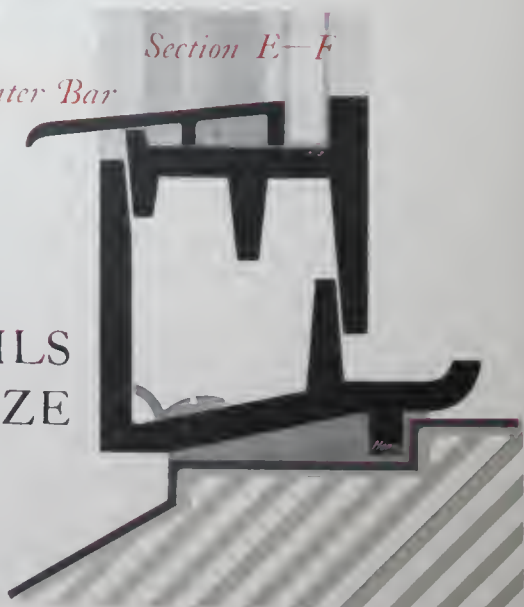


Section C-D

Inside

Bronze Water Bar

DETAILS
FULL SIZE



Section E-F

For full Specification of manufacture see page 7.

NOTES on SECTION, 1a.

CASEMENTS HUNG AT SIDE

Are supplied any height not exceeding 7 ft. by any width not exceeding 3 ft., and in three qualities.

QUALITY 1 fitted with any of the Bronze Handles on page 64 and Stay 223.

QUALITY 2 fitted with any of the Iron Handles on page 65 and Stay 223.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 5 ft. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT BOTTOM

For use above transome are supplied any height not exceeding 3 ft. by any width not exceeding 3 ft., and in three qualities.

QUALITY 1 fitted with Hope's Patent Passable Side Arms and Spring Catch (see page 70).

QUALITY 2 fitted with plain Iron Side Arms and Spring Catch.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 14 and 15, and are supplied in any height not exceeding 7 ft. by any width not exceeding 4 ft.

The illustrations on the opposite page shew the casements divided into panes with \perp bars, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be prepared for leaded glass. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

This section is suitable for all buildings of the best class and is guaranteed weathertight in the most exposed situations.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{4}$ in. INSIDE rebate as shewn on opposite page.

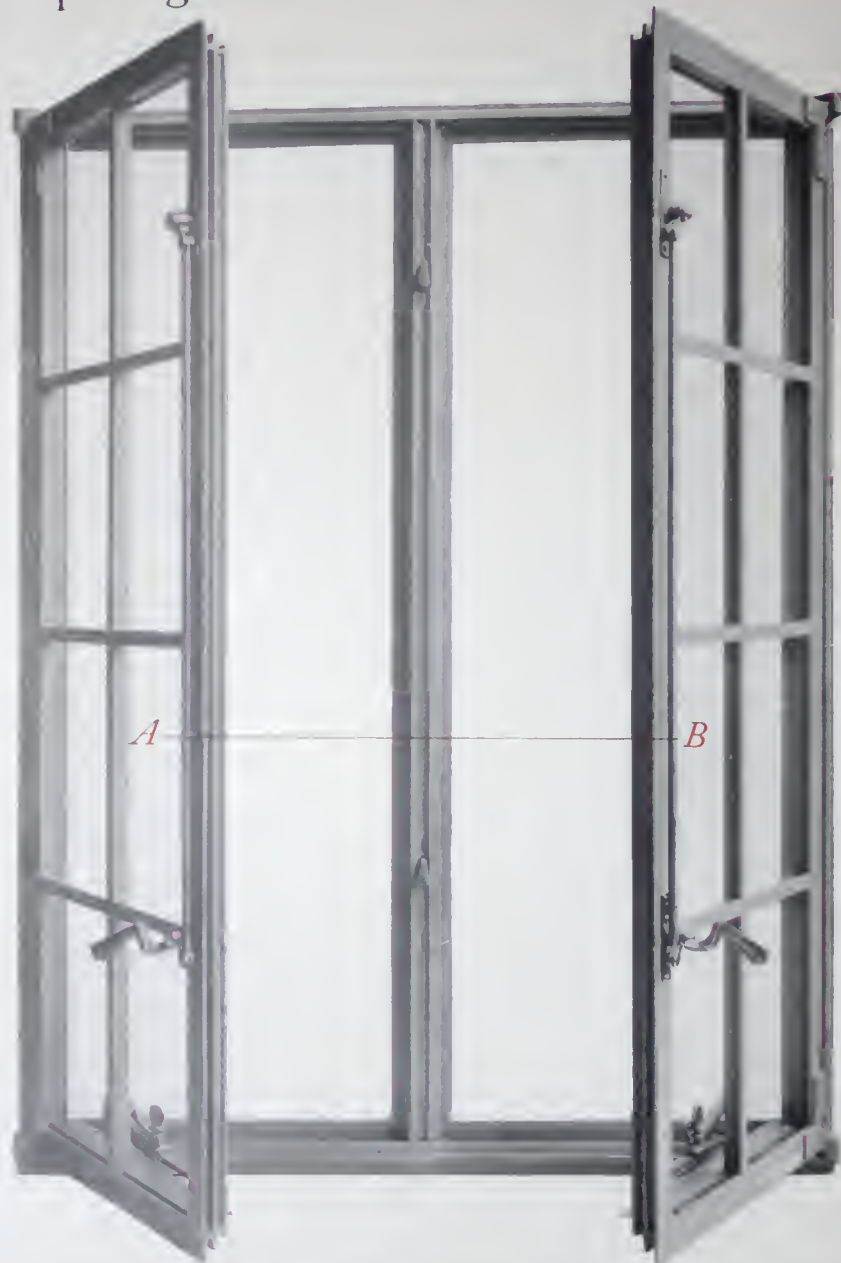
EXAMPLES. Post Office, New Orleans, for the United States Government.
Parliament Buildings, Toronto, Ontario.
Bratenahl, Cleveland, page 144.

For instructions as to ordering see pages 78 & 79.

HOPE'S

SECTION, 1a. FRENCH CASEMENT

Inward Opening Casement & Frame (With Mullion)



One pair of French Casements (with mullion) with 1 bars, fitted with Handle 497 and Double Grip Bolt and Stay 223.



Section A-B, half full size.

French Casements (with mullion), as above illustration, are also manufactured of Section 2a, see page 20; Section 4a, see page 26; and Section 6a, see page 32.

For details of jambs, head and sill, see page 12.

HOPE'S

SECTION, 1a. FRENCH CASEMENT

Inward Opening Casement & Frame (**Without Mullion**)



One pair of French Casements (without mullion) with 1 bars, fitted with Cremorne Bolt and Stay 223.



Section A-B, half full size.

French Casements (without mullion), as above illustration, are also manufactured of Section 2a, see page 20; Section 4a, see page 26; and Section 6a, see page 32. INWARD opening French Casements (without mullion) may be fitted with Espagnolette bolt if preferred.

For details of jambs, head and sill, see page 12.

HOPE'S SECTION, 1c.

Cleaning Casement with Frame



Cleaning Casement
Quality 1, with 1 bars and fitted
with Handle 20a in Plate 200 and
Stay 223.

NOTE.—The full section of
the casement is maintained
throughout and no portion is
movable.

There are no movable parts
and no device of any kind
which is liable to get out of
order.

DETAILS FULL SIZE

For full Specification of manufacture see page 7.



Section A-B



Section C-D



Section E-F

Bronze Water Bar

NOTES on SECTION, 1c.

CLEANING CASEMENTS

Casements hung on vertical pivots to allow of cleaning the outside of the casement from INSIDE are supplied any height not exceeding 7 ft. by any width not exceeding 3 ft., and in three qualities.

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223, or any of the Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 5 ft. high fitted with Double Grip Bolts (see page 68).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

The illustrations on the opposite page shew the casements divided into panes with L bars, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be prepared for glazing with leaded glass. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

This section is suitable for buildings of the best class and is guaranteed weathertight in the most exposed situations.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{4}$ in. outside rebate as shewn on opposite page.

NOTE.—This is our original pattern of cleaning casement which we introduced in 1898. Time and experience have conclusively proved our claims for its durability and efficiency.

One of these casements in the centre of a 3-light window is sufficient to allow for cleaning all three panes of glass from the inside. Cleaning schemes for any building, together with drawings and estimates, will gladly be forwarded on receipt of tracings or blue prints.

EXAMPLES. McGill University, page 135.

Union Bank, Toronto, page 130.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 2.

Outward Opening Casement with Frame



Top hung Casement (for use above transome), Quality 1, glazed with leaded glass and fitted with Hope's Patent Cam Opener.



Side hung Casement, Quality 1, glazed with leaded glass and fitted with Handle 20a on Plate 208 and Stay 223.

Outside



Section A—B

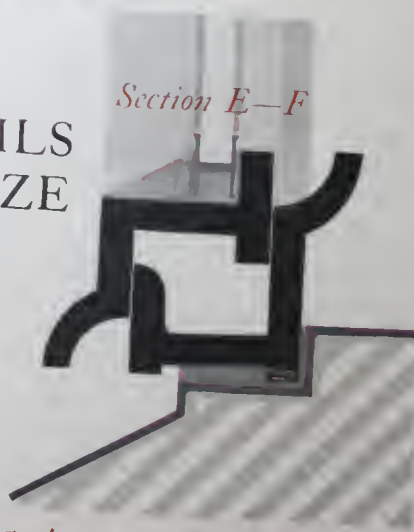


Section C—D

Inside

DETAILS
FULL SIZE

Section E—F



For full Specification of manufacture see page 7.

NOTES on SECTION, 2.

CASEMENTS HUNG AT SIDE

Are supplied any height not exceeding 5 ft. 6 in. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223, or any of the Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 4 ft. 6 in. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

For use above transoms are supplied any height not exceeding 3 ft., by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with Openers 506, 727 or 502 (see pages 70 and 71), or any of the Bronze Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 10 and 11, and are supplied in any height not exceeding 5 ft. 6 in. by any width not exceeding 4 ft.

The illustrations on the opposite page shew the casements glazed with leaded glass, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be divided into panes with steel \perp bars. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

This section is suitable for residences and similar buildings where economy in first cost is of importance. It is a first-rate weathertight casement at a strictly moderate price.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{8}$ in. outside rebate as shewn on opposite page.

EXAMPLES. Princeton University, pages 132 and 133.

Residences on pages 146, 147, 150, 151.

Also the same Section in solid bronze on pages 142, 148, 152.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 2a.

Inward Opening Casement with Frame



Bottom hung Casement (for use above transoms), Quality 1, glazed with leaded glass and fitted with Spring Catch and Hope's Patent Passable Side Arms.



Side hung Casement, Quality 1, glazed with leaded glass and fitted with Handle 258 on Plate 208 & Stay 223

Outside

Section A—B



Section C—D



Inside

Section E—F

Bronze Water Bar

DETAILS
FULL SIZE



For full Specification of manufacture see page 7.

NOTES on SECTION, 2a.

CASEMENTS HUNG AT SIDE

Are supplied any height not exceeding 5 ft. 6 in. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with any of the Bronze Handles on page 64 and Stay 223.

QUALITY 2 fitted with any of the Iron Handles on page 65 and Stay 223.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 4 ft. 5 in. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT BOTTOM

For use above transoms are supplied any height not exceeding 3 ft. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with Hope's Patent Passable Side Arms and Spring Catch (see page 70).

QUALITY 2 fitted with plain Iron Side Arms and Spring Catch.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 14 and 15, and are supplied in any height not exceeding 5 ft. 6 in. by any width not exceeding 4 ft.

The illustrations on the opposite page show the casements glazed with leaded glass, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be divided into panes with \perp bars. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

This section is suitable for residences and similar buildings where economy in first cost is of importance. It is a first-rate weathertight casement at a strictly moderate price.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{4}$ in. INSIDE rebate as shown on opposite page.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 3.

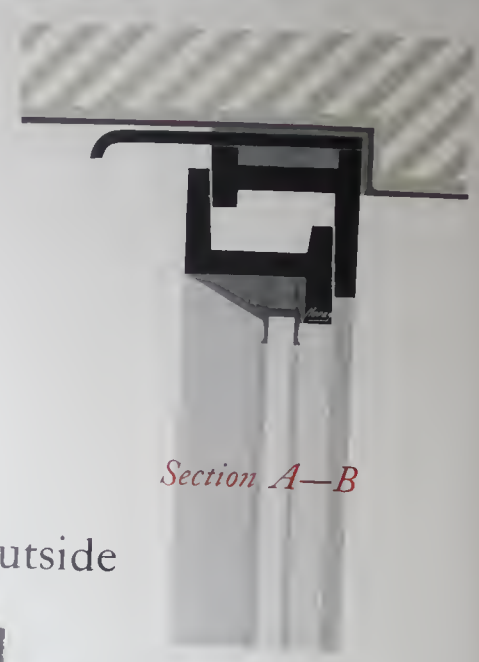
Outward Opening Casement with Frame



Top hung Casement, for use above transoms, glazed with leaded glass and fitted with Peg Stay 226.



Side hung Casement, glazed with leaded glass and fitted with Handle 963 on Plate 890 and Stay 226.



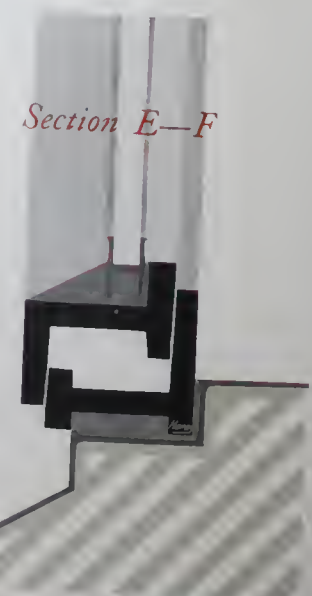
Section A-B

Outside



Section C-D

Inside



Section E-F

DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

NOTES on SECTION, 3.

Supplied any height not exceeding 3 ft. 6 in. by any width not exceeding 1 ft. 9 in., in one quality only.

HARDWARE

For casements *hung at side*, Hope's Patent Two-point Handles 497, 577 or 963, and Iron Stays 218, 219 or 226.

For casements *hung at top* (for use above transome), Iron Stays 218, 219 or 226.

SECTION, 3a, to open Inwards

Supplied in the same sizes as given above, in one quality only, prepared for setting in INSIDE rebates of the same detail as for Section 2a (see page 20).

HARDWARE

For casements *hung at side*, Iron Handles 497, 577 or 963, and Iron Cabin Hook.

For casements *hung at bottom* (for use above transome), Gunmetal Spring Catch and Iron Side Arms.

The illustrations on the opposite page shew the casements glazed with leaded glass, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be divided into panes with \perp bars.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{4}$ in. outside rebate, as shewn on opposite page for Section 3, or with a $\frac{3}{4}$ in. inside rebate, as shewn on page 20, for Section 3a.

NOTE.—This section is only suitable for small casements for cottages and similar buildings. It is weathertight under ordinary conditions of exposure.

EXAMPLES. Gidea Park, page 165. Broxbourne, page 166.

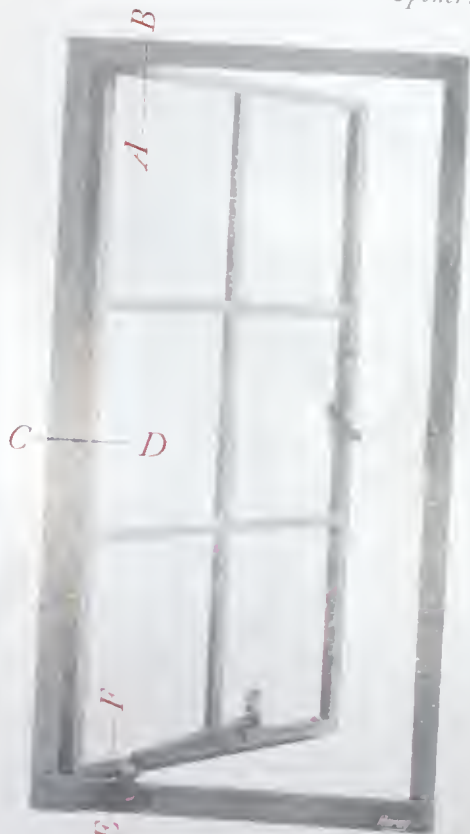
For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 4.

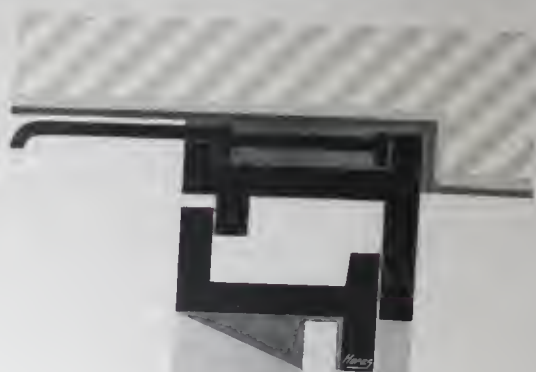
Outward Opening Casement with Frame



Top hung Casement. Quality 1 (for use above transome), with \perp bars and fitted with Hope's Patent Cam Opener.



Side hung Casement. Quality 1, with \perp bars and fitted with Handle 20a on Plate 890 and Stay 223.



Section A—B

Outside



Section C—D

Inside

Section E—F



DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

NOTES on SECTION, 4.

CASEMENTS HUNG AT SIDE

Casements hung at side are supplied any height not exceeding 6 ft. by any width not exceeding 2 ft., and in three qualities.

QUALITY I fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223, or any of the Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY Ia, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 5 ft. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

For use above transoms are supplied any height not exceeding 3 ft. by any width not exceeding 2 ft., and in three qualities.

QUALITY I fitted with Openers 506, 727 or 502 (see pages 70 and 71), or any of the Bronze Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Peg Stays on page 67.

QUALITY Ia, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 10 and 11, and are supplied in any height not exceeding 6 ft. by any width not exceeding 4 ft.

The illustrations on the opposite page show the casements divided into panes with \perp bars, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be prepared for glazing with leaded glass. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{8}$ in. outside rebate as shown on opposite page.

NOTE.—This section has been specially designed to be of universal application to an ordinary $\frac{3}{4}$ in. outside rebate; so that whether made to open outwards as on opposite page, or INWARDS as on page 26, or on vertical pivots as on page 28, the sight lines are the same and the plane of glass is the same. It is between Sections 1 and 2 in regard to strength, and is particularly suitable for composite windows.

EXAMPLES. Royal Liver Building, page 120.

Calico Printers' Association, page 122.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 4a.

Inward Opening Casement with Frame



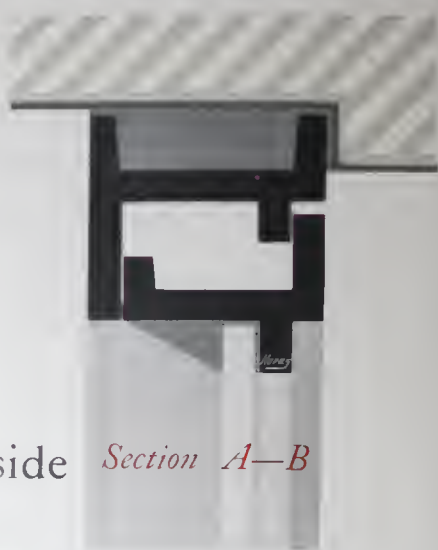
Bottom hung Casement, Quality 1, with 1 bars & fitted with Hope's Patent Pressable Side Arms and Spring Catch.



Side hung Casement, Quality 1, with 1 bars and fitted with Handle 258 and Stay 223.

For full Specification of manufacture see page 7.

Outside Section A—B



Section C—D



Inside

Section E—F

Bronze Water Bar

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FULL SIZE



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NOTES on SECTION, 4a.

CASEMENTS HUNG AT SIDE

Casements hung at side are supplied any height not exceeding 6 ft. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with any of the Bronze Handles on page 64 and Stay 223.

QUALITY 2 fitted with any of the Iron Handles on page 65 and Stay 223.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 5 ft. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT BOTTOM

For use above transome are supplied any height not exceeding 3 ft. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with Hope's Patent Passable Side Arms and Spring Catch (see page 70).

QUALITY 2 fitted with plain Iron Side Arms and Spring Catch.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 14 and 15, and are supplied in any height not exceeding 6 ft. by any width not exceeding 4 ft.

The illustrations on the opposite page shew the casements divided into panes with 1 bars, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be prepared for leaded glass. Galvanized steel glazing beads and brass screws for securing glass without front putty are strongly recommended for first-class work.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{4}$ in. outside rebate as shewn on opposite page.

NOTE.—This section has been specially designed to be of universal application to an ordinary $\frac{1}{2}$ in. outside rebate; so that whether made to open inwards as on opposite page, or outwards as on page 24, or on vertical pivots as on page 28, the sight lines are the same and the plane of glass is the same. It is between Sections 1 and 2 in regard to strength, and is particularly suitable for composite windows.

EXAMPLES. Royal Liver Building, Liverpool, page 120.

Calico Printers' Association, page 122.

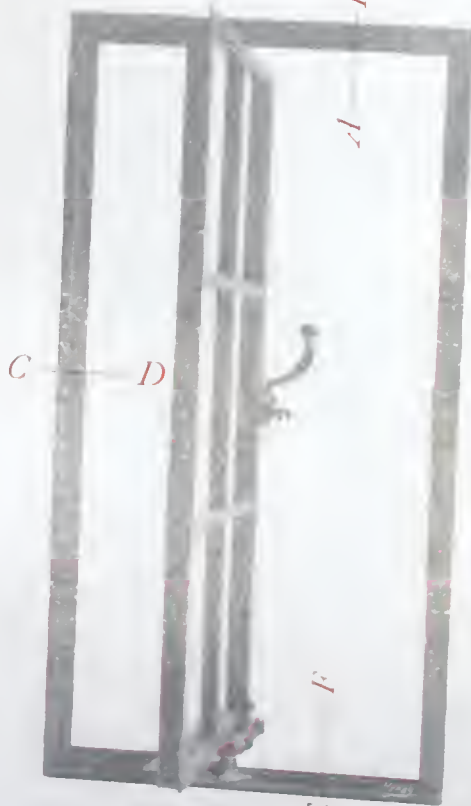
For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 4c.

Cleaning Casement with Frame



*Swinging Casement, Quality 1 with
L bars and fitted with Hope's Spring
Catch and Cord Eye.*



*Cleaning Casement, Quality 1, with
L bars and fitted with Handle 20a on
Plate 890 and Stay 223.*



Outside Section A—B



Section C—D



Inside

Section E—F

Bronze Water Bar

**DETAILS
FULL SIZE**

For full Specification of manufacture see page 7.

NOTES on SECTION, 4c.

CLEANING CASEMENTS

Hung on vertical pivots to allow of cleaning the outside of the casement from INSIDE, supplied any height not exceeding 6 ft. by any width not exceeding 3 ft.

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223, or any of the Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 5 ft. high fitted with Double Grip Bolts (see page 68).

SWINGING CASEMENTS (Section 4 swing)

Hung on horizontal pivots are supplied any height not exceeding 3 ft. by any width not exceeding 3 ft., and in three qualities.

QUALITY 1 fitted with Bronze Spring Catch and Cord Eye and Pulley.

QUALITY 2 fitted with eyes and pulley for cord.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

The illustrations on the opposite page shew the casements divided into panes with \perp bars, but it should be understood that this is not essential and that plate glass in single sheets may be used, or the casements may be prepared for glazing with leaded glass. Galvanized steel glazing beads and brass screws for securing glass without front putty are recommended for first-class work.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{4}$ in. outside rebate as shewn on opposite page.

NOTE.—This section has been specially designed to be of universal application to an ordinary $\frac{3}{4}$ in. outside rebate; so that whether made to open on vertical pivots as on opposite page, or to open outwards as on page 24, or inwards as on page 26, the sight lines are the same and the plane of glass is the same. It is between Sections 1 and 2 in regard to strength, and is particularly suitable for composite windows.

EXAMPLES. Royal Liver Building, Liverpool, page 120.

Calico Printers' Association, page 122.

Northern Assurance Co., page 124.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 6.

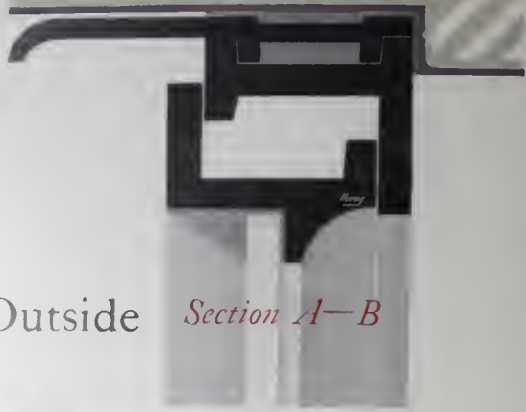
Outward Opening Casement with Frame



Top hung Casement, Quality 1, for use above transoms, with moulded and rebated bars, and fitted with Hope's Patent Cam Operator.



Side hung Casement, Quality 1, with moulded and rebated bars, fitted with Handle 200 on Plate 890 and Stay 223.



Outside Section A—B



Inside

NOTE.—The mouldings may be on the outside if preferred.

Section E—F

DETAILS
FULL SIZE



For full Specification of manufacture see page 7.

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NOTES on SECTION, 6.

CASEMENTS HUNG AT SIDE

Are supplied any height not exceeding 5 ft. 6 in. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223, or any of the Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

All casements over 4 ft. 6 in. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

For use above transoms are supplied any height not exceeding 3 ft. by any width not exceeding 2 ft., and in three qualities.

QUALITY 1 fitted with Openers 506, 727 or 502 (see pages 70 and 71), or any of the Bronze Peg Stays on page 66.

QUALITY 2 fitted with any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills (same hardware as Quality 1).

FIXED LIGHTS

Are made of a section to exactly match the casements in bulk of metal, or they can be made of L section (see page 42).

FRENCH CASEMENTS

Are made of this section either with or without fixed mullions, as illustrations on pages 10 and 11, and are supplied in any height not exceeding 5 ft. 6 in. by any width not exceeding 4 ft.

The quality and strength of this section is in all respects similar to Section 2, but with a moulded edge for use with moulded astragals or glazing bars where this style is preferred to plain L bars.

The mullions, heads and sills may be of wood, stone, brick, terra-cotta or concrete, and should be prepared with a $\frac{3}{8}$ in. outside rebate as shewn on opposite page.

EXAMPLES. Birmingham University, page 134.

Students' Union, South Kensington, page 136.

For instructions as to ordering see pages 78 & 79.